Application No. 09/888,123
Amendment dated October 24, 2005
Response to Office Action of June 22, 2005

Atty. Docket No. 42390P11058
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TC/A.U. 2133

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A method comprising:

reading data from a nonvolatile destructive read memory location, the data encoded by an error correction code;

determining if the data read is corrupt; and

writing a failure codeword in the memory location if the data read is corrupt, wherein the failure codeword is chosen within limits ~~properties~~ of the error correction code so that the failure codeword is not interpreted as a read value and [[its]] a mathematical distance of the failure codeword from all correctable data patterns of the error correction code is greater than the minimum distance of the error correction code.

2-5.   (Canceled)

6.   (Original) The method of claim 1 wherein the data read includes coding bits which are utilized for error correction of the data.

7.   (Canceled)

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8.   (Original) The method of claim 1 wherein determining if the data read is

corrupt includes,

determining if the data read is different from the data originally written to the

memory location.

9.   (Original) The method of claim 1 further comprising:

writing the data to the memory location from where it was read if the data is not

corrupt.

10.   (Currently Amended) An apparatus comprising:

a data storage device;

a read device coupled to the data storage device to read data from a nonvolatile

read-destructive memory location in the data storage device; and

an error correction code decoder coupled to the read device to determine if the

data read is corrupt, and if so, cause a failure codeword to be written to the memory

location from where the data was read, wherein the failure codeword is chosen within

limits ~~properties~~ of the error correction code so that <u>the failure codeword is not</u>

<u>interpreted as a read value and</u> [[its]] <u>a</u> mathematical distance <u>of the failure codeword</u>

from all correctable data patterns of the error correction code is greater than the minimum

distance of the error correction code employed<u>.</u>

11-13. (Canceled)

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14.   (Original) The apparatus of claim 10 wherein the data read is corrupt if it

is different from the data originally written to the memory location.

15.   (Original) The apparatus of claim 10 further comprising:

a write device coupled to the data storage device to store data into the data storage

device.

16.   (Original) The apparatus of claim 15 wherein the write device is coupled

to the read device to write back the data read by the read device to the memory location

from where it was read if the data is not corrupt.

17.   (Original) The apparatus of claim 15 further comprising:

an encoding device coupled to the write device to encode data according to an

error correction code before it is written to the data storage device.

18.   (Original) The apparatus of claim 15 further comprising:

a controller coupled to the write device and the read device to synchronize access

to the data storage device.

19.   (Currently Amended) A machine-readable medium comprising at least

one instruction to preserve the failure state of a memory location, which when executed

by a processor, causes the processor to perform operations comprising:

reading data from a nonvolatile destructive read data storage device, the data

encoded by an error correction code;

determining if the data read is corrupt; and

writing a failure codeword in the memory location if the data read is corrupt,

wherein the failure codeword is chosen within limits ~~properties~~ of the error correction

code so that <u>the failure codeword is not interpreted as a read value and</u> [[its]] <u>a</u>

mathematical distance <u>of the failure codeword</u> from all correctable data patterns of the

error correction code is greater than the minimum distance of the error correction code.

20.   (Canceled)

21.   (Original) The machine-readable medium of claim 19 further comprising

at least one instruction which causes the processor to perform operations comprising:

decoding the data read based on an error correction code.

22.   (Canceled)

23.   (Original) The machine-readable medium of claim 19 wherein

determining if the data read is corrupt includes,

determining if the data read is different from the data originally written to the

memory location.

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24.   (Original) The machine-readable medium of claim 19 further comprising

at least one instruction which causes the processor to perform operations comprising:

writing the data to the memory location from where it was read if the data is not

corrupt.

25.   (Previously Presented) An integrated circuit comprising:

a first processing unit configured to read data from a nonvolatile read-destructive

data storage device; and

a second processing unit communicatively coupled to the first processing unit to

decode the read data, determine if the data is corrupt, and if so, cause a failure codeword

to be written to the memory location from where the data was read, wherein the failure

codeword is chosen within limits ~~properties~~ of the error correction code so that the failure

codeword is not interpreted as a read value and [[its]] a mathematical distance of the

failure codeword from all correctable data patterns of the error correction code is greater

than the minimum distance of the error correction code.

26.   (Canceled)

27.   (Original) The integrated circuit of claim 25 wherein the second

processing unit decodes the read data according an error correction code.

28.   (Canceled)

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29. (Original) The integrated circuit of claim 25 wherein the data read is corrupt if it is different from the data originally written to the memory location.

30. (Original) The integrated circuit of claim 25 wherein the read device causes the read data to be written back to the memory location from where it was read if the data is not corrupt.